

Application No.: 09/683,298

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-4 [Cancelled]

5. [Currently Amended]      An apparatus, comprising:
- a plurality of deposit elements to deposit biological materials on a depositing surface;
  - a first mounting assembly operatively coupled to enable movement of the deposit elements, wherein the first mounting assembly comprises a first rotatable element and permits the deposit elements to rotate around a first axis perpendicular to the depositing surface;
  - a second mounting assembly operatively coupled to enable movement of the deposit elements, wherein the second mounting assembly comprises a second rotatable element and permits the deposit elements to rotate around a second axis parallel to the depositing surface; and
  - a third mounting assembly operatively coupled to enable movement of the deposit elements, wherein the third mounting assembly comprises a third rotatable element and permits the deposit elements to rotate around a third axis to the depositing surface.
6.      [Original]      The apparatus of claim 5, wherein:  
the deposit elements include pins, quills, or jetting elements.
7.      [Original]      The apparatus of claim 5, wherein:  
the second and third axes are perpendicular to each other.
8.      [Currently Amended]      The apparatus of claim 5, wherein:  
the first mounting assembly ~~is moveable~~ rotates independently of one or both of the second and third mounting assemblies such that ~~movement~~ rotation around the first

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axis is uncoupled from ~~movement-rotation~~ around one or both of the second and third axes, respectively.

9. [Currently Amended] The apparatus of claim 5, wherein:  
the second mounting assembly is ~~movable~~ rotates independently of one or both of the first and third mounting assemblies such that ~~movement-rotation~~ around the second axis is uncoupled from ~~movement-rotation~~ around one or both of the first and third axes, respectively.
10. [Previously Amended] The apparatus of claim 5, wherein:  
the depositing surface is a surface of a substrate; and  
the apparatus further comprises a holding element to hold the substrate.
11. [Original] The apparatus of claim 10, wherein:  
the depositing surface is substantially flat.
12. [Previously Amended] The apparatus of claim 10, wherein:  
the substrate includes a second substantially flat surface parallel and opposed to the depositing surface; and  
the holding element includes a platen having a substantially flat surface to conformingly receive the second surface of the substrate.
13. [Original] The apparatus of claim 12, wherein:  
the substrate includes a microscope slide.
14. [Previously Amended] The apparatus of claim 5, further comprising:  
one or more reference planes for registering the deposit elements.
15. [Previously Amended] The apparatus of claim 14, wherein:  
the depositing surface includes a top surface of a microscope slide; and

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the one or more reference planes includes a yaw reference plane perpendicular to the first axis.

16. [Currently Amended] The apparatus of claim 5, further comprising:  
one or more securing elements to secure the deposit elements at a first position with respect to ~~movement~~ rotation around the first axis, a second position with respect to ~~movement~~ rotation around the second axis, and a third position with respect to ~~movement~~ rotation around the third axis.

17. [Original] The apparatus of claim 16, wherein:  
the first, second, and third positions are determined so that biological materials are deposited from each of the deposit elements at substantially a ninety degree angle to the depositing surface.

18. [Original] The apparatus of claim 5, wherein:  
the first mounting assembly includes one or more bearing surfaces concentric with the first axis.

19. [Previously Amended] The apparatus of claim 18, further comprising:  
a gantry; and wherein  
the first mounting assembly further includes a print head mount to mount the first mounting assembly to the gantry, and a head mounting plate coupled to the deposit elements and including the one or more bearing surfaces.

20. [Original] The apparatus of claim 5, wherein:  
the first mounting assembly provides yaw adjustment using two or more reference surfaces.

21. [Original] The apparatus of claim 20, wherein:

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the yaw adjustment includes rotating the depositing elements about the first axis without additional translation in a plane parallel to the depositing surface.

22. [Currently Amended] An apparatus, comprising:

a first mounting assembly ~~operatively coupled to enable movement of a plurality of biological deposit elements, wherein the first mounting assembly comprises a first rotatable element and permits the deposit element to rotate~~ around a first axis;

a second mounting assembly ~~operatively coupled to enable movement of the biological deposit elements, wherein the second mounting assembly comprises a second rotatable element and permits the deposit elements to rotate~~ around a second axis different from the first axis; and

a third mounting assembly ~~operatively coupled to enable movement of the biological deposit elements, wherein the third mounting assembly comprises a third rotatable element and permits the deposit elements to rotate~~ around a third axis different from the first and second axes.

Claims 23-33 [Cancelled]